Advances in collaborative modelling and simulation for natural renewable resource management in Southeast Asia

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Abstract

In recent years, a network of practitioners have been testing, improving and developing case studies using a collaborative modelling and simulation methodology based on the multi-agent systems paradigm, to examine complex renewable resource management issues in Southeast Asia. The main objective of this so-called Companion Modelling (ComMod) approach is to facilitate dialogue and shared learning among concerned stakeholders through highly interactive and participatory processes. This is also to improve collective decision-making and to strengthen the adaptive management capacity of rural communities by using complementary integrated collaborative modelling and simulation tools.

The presentation will justify why the use of such participatory processes is adapted to current complex and wicked problems faced by resource managers in SE Asia. The underlying scientific posture and key theoretical references will be clarified, before to characterize the original features of the ComMod approach and the specificities of its key tools. The main phases of a ComMod process will be described and illustrated by recent case studies implemented in several SE Asian countries on themes like water and biodiversity management, land use change, soil degradation, etc. These concrete cases will also display the range of immediate to longer-term effects and impacts of such collaborative processes on the collectively managed resources and their users.

Finally the current activities (research, teaching & training, counselling, etc.) of the SE Asian colleagues belonging to the regional ComMod network and the hot topics to further improve this approach, particularly by out and upscaling it, will be highlighted.